Coregonus clupeaformis (Lake Whitefish)

Report Date: January 13, 2016

Priority 2 Species of Greatest Conservation Need (SGCN)

Class: Actinopterygii (Ray-finned Fishes)

Order: Salmoniformes (Salmon, Trout, And Whitefish)

Family: Salmonidae (Salmonids)

General comments:

Declining in Maine

Species Conservation Range Maps for Lake Whitefish:

Town Map: <u>Coregonus clupeaformis_Towns.pdf</u>
Subwatershed Map: <u>Coregonus clupeaformis_HUC12.pdf</u>

SGCN Priority Ranking - Designation Criteria:

Risk of Extirpation: NA

State Special Concern or NMFS Species of Concern:

Coregonus clupeaformis is listed as a species of Special Concern in Maine.

Recent Significant Declines:

Lake Whitefish is currently undergoing steep population declines, which has already led to, or if unchecked is likely to lead to, local extinction and/or range contraction.

Notes:

2013 Maine ESA Status Review;

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Regional Endemic: NA

High Regional Conservation Priority: NA High Climate Change Vulnerability:

Vulnerability: 3, Confidence: High, Reviewers: Decided in Workshop (W)

Understudied rare taxa: NA

Historical: NA

Culturally Significant: NA

Habitats Assigned to Lake Whitefish:

Formation Name Freshwater Aquatic

Macrogroup Name Lakes and Ponds

Habitat System Name: Mesotrophic or Intermediate

Habitat System Name: Oligotrophic

Stressors Assigned to Lake Whitefish:

Stressor Priority Level based on Severity and Actionability

	Moderate Severity	High Severity
Highly Actionable	Medium-High	High
Moderately Actionable	Medium	Medium-High
Actionable with Difficulty	Low	Low

IUCN Level 1 Threat Other Options

IUCN Level 2 Threat: Lack of knowledge

Severity: Moderate Severity **Actionability:** Highly actionable

Notes: Developing successful restoration strategies remains elusive. Further research into enhancing recruitment or

sucessfully mitigating competing fish interactions may be beneficial.

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IUCN Level 1 Threat Transportation and Service Corridors

IUCN Level 2 Threat: Roads and Railroads

Severity: Moderate Severity Actionability: Highly actionable

Notes: Undersized road stream crossings contribute to increased sedimentations and are potential barriers to fish

movments, ie for spawning.

IUCN Level 1 Threat Pollution

IUCN Level 2 Threat: Agricultural and Forestry Effluents

Severity: Moderate Severity Actionability: Moderately actionable

Notes: Run-off from extensive forest spraying is a likely stressor, ex. Budworm mitigation

IUCN Level 1 Threat Invasive and Other Problematic Species, Genes and Diseases

IUCN Level 2 Threat: Invasive Non-native-Alien Species-Diseases

Severity: Severe **Actionability:** Actionable with difficulty

Notes: Poor competitors with large predatory fishes. MUS, PIK, Black basses primarily

IUCN Level 2 Threat: Problematic Native Species-Diseases

Severity: Severe Actionability: Actionable with difficulty

Notes: Poor competitors with large predatory fishes. SMT and LLS primarily.

IUCN Level 1 Threat Natural Systems Modifications

IUCN Level 2 Threat: Dams and Water Management-Use

Severity: Moderate Severity Actionability: Actionable with difficulty

Notes: Lock Dam on Chamberlain Lake diverts flow from historical whitefish spawning trib to Telos Cut

IUCN Level 1 Threat Pollution

IUCN Level 2 Threat: Domestic and Urban Waste Water

Severity: Moderate Severity Actionability: Actionable with difficulty

Notes: Residential development on whitefish lakes can affect water quality and contribute to excessive nutrient run-off.

Species Level Conservation Actions Assigned to Lake Whitefish:

None. Only species specific conservation actions that address high (red) or medium-high (orange) priority stressors are summarized here.

Conservation Actions Associated with the Whitefishes Guild:

Conservation Action Category: Research Biological Priority: high Type: on-going

Identify factors that have contributed to declining populations of lake whitefish.

Stressor(s) Addressed By This Conservation Action

Invasive Non-native-Alien Species-Diseases, Problematic Species-Diseases of Unknown Origin, Problematic Native Species-Diseases, Fishing and Harvesting of Aquatic Resources, Lack of knowledge, Agricultural and Forestry Effluents

Conservation Action Category: Research Biological Priority: critical Type: on-going

Determine population abundance, habitat use, size and age structure and interaction with other fish species in representative waters

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Stressor(s) Addressed By This Conservation Action

Fishing and Harvesting of Aquatic Resources, Habitat Shifting or Alteration, Invasive Non-native-Alien Species-Diseases, Problematic Species-Diseases of Unknown Origin, Problematic Native Species-Diseases, Dams and Water Management-Use, Lack of knowledge

Conservation Action Category

Category: Species Management

Biological Priority: critical

Type: on-going

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Develop and implement rehabilitation programs for fisheries that have declined.

Stressor(s) Addressed By This Conservation Action

Lack of knowledge, Fishing and Harvesting of Aquatic Resources, Habitat Shifting or Alteration, Dams and Water Management-Use, Invasive Non-native-Alien Species-Diseases, Problematic Species-Diseases of Unknown Origin

Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.